

### Abstract of the Disclosure

5 A spread spectrum demodulator which is capable of correctly and simultaneously demodulating reception waves that were spread by using the same spreading signal and transmitted from a plurality of transmitters. A plurality of reception waves that are spread by using the same spreading signal and transmitted from a plurality of transmitters can correctly be demodulated simultaneously by establishing initial synchronization for each of  
10 the reception waves and then tracing reception timing of each reception wave individually. A plurality of tracing circuits for tracing a plurality of reception waves, respectively, are provided and each of the tracing circuits can communicate the timing of the reception wave being traced by itself to a masking circuit to prevent the other tracing circuits from operating with the  
15 same timing. The masking circuit can invalidate timing detected by an amplitude judgment circuit if it precedes or succeeds already detected timing by, for example, a 0.5 chip timing or less. This makes it possible to prevent an already detected transmission wave from being detected again.